



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/801,155

03/07/2001

Martin W. McKinnon III

10263-33247

4303

5642

7590

04/11/2005

SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE, GA 30044

EXAMINER

PHUNKULH, BOB A

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,155

Applicant(s)MCKINNON ET AL. **Examiner**

Bob A. Phunkulh

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to applicant's 02/22/2005 amendment(s)/response(s) in the application of **MCKINNON et al.** for **"COMPUTERIZED METHOD FOR ALLOCATING ACCESS ACROSS A SHARED COMMUNICATION MEDIUM"** filed 03/07/2001. The amendments/response to the claims have been entered. No claims have been canceled. No claims have been added. Claims 1-35 are now pending.

Claim Objections

Claim 6 is objected to because of the following informalities: please insert "." after the word "availability." Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6, 12, 16, 20, 27, 30, 31, 32, it is not clear what it meant by **"subject to a respective, predetermined maximum value and subject to bandwidth availability"** as cited in the claims i.e. what is the predetermined maximum value? Also, delete the "," after the subject matter "respective."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by ***Jang*** et al. (US 6,175,554), hereinafter ***Jang***.

Regarding claim 1, ***Jang*** discloses a computerized method of allocating among a plurality of users bandwidth for conveying information across a shared communications medium, comprising the steps of:

(a) receiving data representative of past bandwidth of each user during a time interval (adaptively learning the number of cells received during a setting time slot, see abstract);

(b) forecasting future bandwidth of each user over a future time interval based on the data representative of the past bandwidth (traffic predictors of neural networks for generating predicted traffic values designating the number of cells which is expected to arrive during a future time slot, see abstract);

(c) prioritizing users (the QOS defines the priority for the users, see col. 7 lines 67 to col. 8 line 3); and

(d) allocating bandwidth to each user sequentially in decreasing order of user priority (see col. 7 lines 67 to col. 8 line 3).

Regarding claim 2, **Jang** discloses the data received is associated with data representative of bandwidth requested for each user (the traffic predictors corresponding to each sources adaptively learning the number of cell received during a setting time slot, see col. 3 lines 1-19).

Regarding claim 3, **Jang** discloses the data received is associated with data representative of bandwidth consumption of each user (the traffic predictors corresponding to each sources adaptively learning the number of cell received during a setting time slot, see col. 3 lines 1-19).

Regarding claim 4, **Jang** discloses the bandwidth that is forecasted is the bandwidth consumption of each user (the traffic predictors corresponding to each sources adaptively learning the number of cell received during a setting time slot, see col. 3 lines 1-19).

Regarding claim 5, **Jang** discloses users are prioritized based on each user's forecasted future bandwidth consumption in increasing order, whereby a user with a lesser forecasted bandwidth consumption receives a higher priority than a user with a greater forecasted bandwidth consumption (a traffic flow rate controller (TFRC) of an

Art Unit: 2661

expert system for calculating an optimal flow rate of each traffic source to control the congestion of the output buffer, by using service rates of the traffic sources, **traffic types (QOS)**, peak bit rates, **predicted traffic values**, and the number of cells which cannot be processed in the output buffer, see col. 3 lines 13-19; and the QOS defines the priority for the users, see col. 7 lines 67 to col. 8 line 3).

Regarding claim 6, **Jang** discloses each user's allocation of bandwidth (optimal flow rate) for the future time interval is set to equal each user's forecasted bandwidth consumption subject to a respective, predetermined maximum value and subject to bandwidth availability (a traffic flow rate controller (TFRC) of an expert system for calculating an optimal flow rate of each traffic source to control the congestion of the output buffer, by using service rates of the traffic sources, **traffic types (QOS)**, **peak bit rates**, **predicted traffic values**, and the number of cells which cannot be processed in the output buffer, see col. 3 lines 13-19; and the QOS defines the priority for the users, see col. 7 lines 67 to col. 8 line 3).

Regarding claim 9, **Jang** discloses the data representative of past bandwidth consumption comprise the number of logical data units transmitted from and to each user during the past time interval (learning the number of cells received during a setting time slot, see col. 3 lines 5-7).

Regarding claim 10, **Jang** discloses the data representative of past bandwidth consumption comprise data representative of the number of bytes transmitted from and to each user during the past time interval (learning the number of cells received during a setting time slot, see col. 3 lines 5-7).

Regarding claim 11, **Jang** discloses the data representative of past bandwidth consumption comprise data representative of the number of data packets transmitted from and to each user during the past time interval (learning the number of cells received during a setting time slot, see col. 3 lines 5-7).

Allowable Subject Matter

Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12-32 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

Any response to this action should be mailed to:

The following address mail to be delivered by the United States Postal Service (USPS) only:

Mail Stop _____
Commissioner for Patents

Art Unit: 2661

P. O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

The following address mail to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, Hand Delivery, etc.) as follow:


U.S. Patent and Trademark Office
220 20th Street South
Customer Window, Mail Stop _____
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tuesday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Chau Nguyen**, can be reach on **(571) 272-3126**. The fax phone number for this group is **(703) 872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bob A. Phunkulh



**BOB PHUNKULH
PRIMARY EXAMINER**

TC 2600
Art Unit 2661
April 05, 2005